**IN THE CLAIMS:**

Claims 8, 14, and 19 were previously canceled. Claim 6 has been cancelled herein. Claims 1-4, 7, 9, 13, 16, and 20 have been amended herein. All of the pending claims are presented below. This listing of claims will replace all prior versions and listings of claims in the application. Please enter these claims as amended.

**Listing of the Claims:**

1. (Currently amended) An electrically powered apparatus for generating a solute to ~~sanitise~~ sanitize a body of water, a by-product of such generation being an explosive gas, said apparatus including :

a) an electrolytic cell operable only in a substantially vertical orientation and through a range of angles either side of the vertical up to a predetermined maximum angle, the maximum angle being 45 degrees or less;

b) a water inlet and outlet both located at the lower end of said electrolytic cell whereby no water can permanently collect above the base of the electrodes of said electrolytic cell; ~~and~~

c) a defined space surrounding said electrodes of said electrolytic cell, ~~wherein,~~ such that, in the event that water flow through said apparatus ceases and said electrolytic cell continues to produce said explosive gas, said explosive gas will displace water in said defined space until there is no water around or between said electrodes that would enable electrolysis and explosive gas production to continue and the maximum accumulated volume of said explosive gas is substantially restricted to that of said defined ~~space.~~ space; and

d) a bi-directional water flow by-pass means located at the lower end of the electrolytic cell to cause a portion of the total water flow to by-pass said electrolytic cell by passing directly from said inlet to said outlet, wherein said by-pass means regulates water flow to said electrolytic cell, allowing excess water flow to by-pass said electrolytic cell.

2. (Currently amended) An apparatus for generating a solute to sanitize a body of water, a by-product of such generation being an explosive gas, ~~according to claim 1, further~~ said apparatus including :

a) an electrolytic cell comprising at least one electrode and operable through a range of angles from vertical up to within 45 degrees to the vertical;

b) a water inlet and outlet integral to a lower body chamber of said electrolytic cell whereby no water can permanently collect above the base of the at least one electrode of said electrolytic cell;

c) a defined space, surrounding the at least one electrode of said electrolytic cell, and configured to enable said explosive gas to displace water in said defined space, in the event that water flow through said apparatus ceases, until said explosive gas substantially fills said defined space; and

d) an orientation responsive means to switch off power to said electrolytic cell when said electrolytic cell is orientated outside said range of angles.

3. (Currently amended) An apparatus according to ~~claim 15~~ claim 2, wherein said orientation responsive means is a tilt switch associated with said electrolytic cell, said tilt switch being adapted to prevent delivery of power to said electrolytic cell when said electrolytic cell is orientated outside said range of angles.

4. (Currently amended) An apparatus according to ~~claim 16~~ claim 3, wherein said tilt switch is wired and fitted into said electrolytic cell, wherein if said electrolytic cell is not vertically upright when plumbed, said tilt switch, which will have a predetermined electrical contact break at a specific angle of less than 45 degrees from the vertical, will activate to cut power to said electrolytic cell.

5. (Original) An apparatus according to claim 1, further including a lower chamber incorporating said inlet and said outlet.

6. (Canceled)

7. (Currently amended) An apparatus according to ~~claim 6~~ claim 1, wherein said ~~integral~~ by-pass means serves two purposes :

(1) to deliver a predetermined water flow through an electrode chamber defining said defined space ~~whilst~~ while allowing excess water flow to by-pass said electrode chamber; and

(2) to prevent undesirable back pressure in systems where the flow rate is or must remain high.

8. (Canceled)

9. (Currently amended) An apparatus according to claim 7, wherein said apparatus includes a chlorinator power supply that uses current draw information derived from said cell electrodes to modulate and control power delivery to said electrolytic cell to fully ~~optimise~~ optimize cell efficiency and durability even if the salinity is higher than ideal.

10. (Previously presented) An apparatus according to claim 7, further including a salinity sensor adapted to communicate data to a microprocessor associated with said electrolytic cell, said microprocessor operable to regulate the operation of said electrolytic cell.

11. (Previously presented) An apparatus according to claim 7, further including a current draw sensor adapted to communicate data to a microprocessor which responds to said data to regulate the operation of said electrolytic cell.

12. (Previously presented) An apparatus according to claim 9, wherein said current draw information is directly related to the salt levels in the water such that if the current draw exceeds a predetermined maximum required for said electrolytic cell to produce a published chlorine maximum, an On/Off duty cycle of the power delivery to said electrolytic cell is altered so that the total chlorine production per hour is moderated to correspond to the desired chlorine production rate.

13. (Currently amended) An apparatus according to ~~claim 6~~ claim 1, wherein said by-pass means comprises a bi-directional check valve, wherein said check valve provides for the bi-directional flow of water across said check valve ~~whilst~~ while controlling the water flow provided by a pump through said electrolytic cell, the flow of water across the opening allowing enough water to flow through it in both directions such that it is at least equivalent to the rate at which the hydrogen gas displaces the water in the electrode chamber.

14. (Canceled)

15. (Original) An apparatus according to claim 1, further including an inner bi-polar electrode bundle comprising between seven and nineteen electrode plates.

16. (Currently amended) An apparatus according to claim 2, further including :

~~d) a cell~~ e) a cell chamber housing said electrolytic cell and defining said defined space, whereby said cell chamber defines a passage for the in-flow of water from said inlet; and

~~e) an outer~~ f) an outer chamber, housing said cell chamber whereby an outer space is defined between the outer surface of said cell chamber and the inner surface of said outer chamber, the outer space serving as a return passage for outgoing water which has come from said electrolytic cell and is heading for said outlet.

17. (Previously presented) An apparatus according to claim 13, further including a pressure relief valve in said lower chamber, wherein, in the event that both said inlet and outlet are closed and augmentary electronic protection devices fail to detect the absence of water flow and fail to suspend power to said electrolytic cell, said pressure relief valve will open to allow the hydrogen gas to displace the water from said cell chamber which, when complete, will effectively cause a cessation of electrolysis.

18. (Original) An apparatus according to claim 1, further including a flow switch to detect the absence of water flow through said apparatus, whereby said flow switch is adapted to effect the cutting of power to said apparatus if the water flow reaches an unsustainably low rate.

19. (Canceled)

20. (Currently amended) An apparatus ~~according to claim 1~~ for generating a solute to sanitize a body of water, a by-product of such generation being an explosive gas, said apparatus including:

a) an electrolytic cell installed at least within 45 degrees of a vertical orientation;

b) a water inlet and outlet both located at the lower end of said electrolytic cell whereby no water can permanently collect above the base of the electrodes of said electrolytic cell; and

c) a defined space surrounding said electrodes of said electrolytic cell, arranged such that, where there are less than a full complement of electrode plates necessary to fill said defined space, the defined space contains an insulator and flow regulator configured to fill at least a cross-sectional area of said defined space not occupied by the electrodes~~, whereby~~ and to provide resistance to water flow which would otherwise be present with the full complement of plates, ~~the arrangement being effective to ensure sufficient time exposure of the flowing water to said electrodes~~ and wherein the defined space is adapted to substantially restrict a volume of explosive gas produced during electrolysis to that of said defined space, in the event water flow to said electrolytic cell ceases.